Playful museums

Mobile audiences and exhibitions as game experiences

Sandvik, Kjetil

Publication date:
2013

Document version
Early version, also known as pre-print

Citation for published version (APA):
Sandvik, K. (2013). *Playful museums: Mobile audiences and exhibitions as game experiences*. Paper presented at NORDMEDIA, Oslo, Norway.

Author:

Kjetil Sandvik, MA, PHD, associate professor

Dept. of Media, Cognition and Communication, University of Copenhagen

Njalsgade 80

2300 København

Tlf. +4524944770

sandvik@hum.ku.dk

Title:

Playful Museums: mobile audiences and exhibitions as game experiences

Abstract:

Digital media constitute challenges not only to institutions communicating art, history, cultural heritage, but to all types of institutions, organizations and businesses. And especially with the emergence and vast (and fast) spread of so-called social or participatory media and Web 2.0 technologies these challenges are but increasingly inviting us to rethink communication all together. The open-endedness and the playfulness of these media and media technologies, the radical possibilities for dialogic processes, for collaboration and co-creation when it comes to game-like, user-centered experiences and content vouch for methodologically (re)thinking communication as dynamic processes which – instead of processes transporting information/media content – is regarded as something which – appropriating the idea of *the perpetual beta* – is continuously developing and constantly at play and changing as a result of a communication format characterized by collaboration, participation and co-creation.

This paper focuses on how this way of applying digital media in museum communication has been put to use in an augmented reality 'game' telling the Renaissance story of Danish city Kolding, using smartphones and the city as a ubiquitous game universe. The paper demonstrates how the interplay between mobile media technology and physical places is a potent tool when it comes to meeting the challenges and potentials put forward by digital, mobile media to museums when it comes to creating new and engaging experiences which are based on playful collaboration, participation and co-creation.

Kjetil Sandvik

Playful Museums: mobile audiences and exhibitions as game experiences

This paper presents and discusses methods for meeting the challenges which digital media (with their mobile and ubiquitous characteristics) as well as a constructivist approach towards learning and the paradigm of experience economy with their common focus on user participation and co-creation present to museums and other institutions communicating cultural history/heritage to an audience which increasingly is accustomed to being an (inter)active part of any cultural experience.

Digital media constitute challenges not only to institutions communicating art, history, cultural heritage, but to all types of institutions, organizations and businesses. And especially with the emergence and vast (and fast) spread of so-called social or participatory media and Web 2.0 technologies these challenges are but increasingly inviting us to rethink communication all together. The open-endedness of these media and media technologies, the radical possibilities for dialogic processes, for collaboration and co-creation when it comes to user-generated experiences and content vouch for methodologically (re)thinking communication as dynamic processes which – instead of processes transporting information/media content – is regarded as something which is continuously developing and constantly changing as a result of a communication format characterized by collaboration, participation and co-creation.

In the opening sequence of the game *The 23 Skulls – a conspiracy tail about the history of Vejle*[1] the players are put in the role as journalists investigating the disappearance of a museum inspector. He has left behind a lot of notes and disturbing video clips on YouTube about a conspiracy engineered by powerful men throughout the history of Vejle city. And he has left maps of the city on Google Maps containing trails through the city and layers of information about various places, various building, and various persons – everything accessible on a variety of interconnected web 2.0-services. It all relates to the 23 human skulls (actually) embedded in the walls of Sct. Nicolaj Church, and signs and clues are scattered all over town: on facades, monuments, inside buildings. And as such – to the players the city has been altered; it has been augmented by the interplay

[1] This project which was developed for Vejle Museum is still in an early stage of development has only been tested on an alpha-level by a few players from our target group. There is still a lot of work to be done before the game can be played for real. However, the project has been used for developing methods and gaining experiences for developing new projects (such as the present Kolding-project) using mobile phones and augmented reality as tools for communicating culture.

between and interweaving of the mediated city and the actual physical city. As such this new, mixed reality version of Vejle, which the players now are to investigate, may be understood as an augmented place.

The project, which I have been recently working on and will be presenting in this paper, builds upon the formats developed with the *23 Sculls* project. "Stol ikke på nogen. Et rænkespil om Kongens Kolding" [Trust No-one! A conspiracy play about the King's Kolding] is being developed for Kolding Library and City Archive in order to communicate the history of renaissance Kolding – a time when the city functioned as part-time Danish capitol and Koldinghus Castle as the royal residence – through an augmented reality game using mobile phones, a pervasive playable conspiracy plot about power and politics, and the city as a ubiquitous game universe. The basic idea is to make the participants get a sense of the historical city through a number of tableaus telling short tails of actual yet colorful events while suggesting the evil forces are at play and suggesting that each tail is part of a larger conspiracy scheme. Using the mobile phone and augmented reality technology, the locations included in the game are over-layered with various types of audio-visual information making the mobile phone function as a window back in time producing a specific sense of place which is a blend between – or a double vision of – the city today and the city of the past.

New senses of place: augmented reality

Today's new media are not just shaping our sense of place, but they are also actually producing new types of places and new types of spatial experiences. Scannell (1996, p.172) has claimed that mass media create a "doubling of place" between the space represented in media and the space in which the media content is perceived, and Meyrowitz (2005) has pointed out, that we experience locally through our bodies, but what we experience may derive from a variety of different spaces brought to us through media. Thus our perception of places is increasingly connected to our use of media and especially new media (the internet and mobile phones). We both draw upon online information and communicate our own experience through internet-applications such as Facebook, Twitter, Flikr, Google Earth together with mobile phone embedded technologies like text messaging, GPS, mp3-players and so on. New media enable us to communicate our experiences encountering actual places and exchange them online and in real-time with friends, family and the rest of the online world (Molz 2004).

Following this line of argument, the experience of places will always be connected to

various forms of mediatization which define and frame the way we experience and how we define ourselves and the roles we play in connection to this experience. We use media as an important element in shaping the our experience places through individual storytelling and staging of self (e.g. the use of mobile phones to upload pictures and personal comments on a personal blog, on Google Earth, Twitter, and so on).

These and other forms of media-based representation and production of places which are both connected to mediation of the actual place on the one hand and to the mediatization of our experience of this place on the other can be seen as a process of *augmentation*; an informational, aesthetical and/or emotional enhancement of our sense and experience of place by means of mediatization. We understand places through media (e.g. Lonely Planet, Google Earth, travel literature and so on), we use media to construct places (using cameras, mobile phones, GPS, maneuvering through 3D-structures by means of an interface and some kind of avatar in a computer game, and so on), and media shapes our experience of places (guided tours, theme parks, computer simulated worlds like the ones found in computer games, and so on).

Perception of augmented places implies a specific type of spatial practice including a strong element of performativity which resembles the mode of reception of (computer) games: The place comes into being through our performance (actions, movement, navigation…). This performative element implying the active use of the recipient's body and navigations through physical space as a central part of the reception (and thus construction) of place is present in most of the augmentation strategies presented in this article. If you go to London and buy one of Soundmap's Audio Walks you get to download a tour on your mp3-player in which "narrators will give you the ultimate guide of the area they love" and you get to "hear the stories and secrets of the streets and be immersed into a world of music, interviews and sound effects" (www.soundmap.co.uk). The same type of spatial augmentation by means of staging can be found in Copenhagen Audio Walks enhancing your experience of a walk through the city by applying various stories and facts to various places you encounter as you move your body through the urban space (see www.audiowalks.dk). The system tells you where to go, which route to take, but it is for you to perform the walk itself and operate the system according to the instruction to get the various tales and historical facts delivered in the right places.

It can be argued that the actual perception and experience of touristic practices such as 'murder walks' in connection to either real or fictional crime events may be seen as simulation of

places and spatial experience: the participating tourists are performing navigational operations which simulates those of the murderer (e.g. Jack the Ripper when embarking on a Jack the Ripper-tour in west-end London) or the investigating detective (e.g. Kurt Wallander when going on a sight-seeing tour visiting the various scenes of crime in the Swedish town Ystad (and its surroundings) as they are played out in the TV series about Henning Mankell's famous detective). As a result of their performative actions the tourists are connecting themselves to the various plots of the augmented places they encounter, often in complex ways where historical facts are blended with fiction, folklore and with tales told by other participants in these types of staged events. Thus the place is reconstructed in a way which bares references not just to their historical factuality, but to a variety of other sources.

The performative aspect of perception of augmented places through simulation may be radically advanced in cases where we do not just encounter the place as spectators but also are given a specific role in the narrative experience. Here we find cultural phenomena like different kinds of role-playing games in which a physical space is being used as a setting for the game itself. But unlike the stage-set in the theatre or the film-set in movie-productions, the place itself has not been constructed, altered or manipulated. When we are looking at these types of augmented places we find that the actual places (the specific town quarter, the specific street, the specific café) as well as not-participating people just happening to be present at the time of the game are included as a setting without being staged. But to the participating players the chosen quarter, street or café are more than just locations in the physical world, they are embedded with a certain meaning (narrative, emotion etc.) and thus part of the game fiction being played out. This performative practice through which the embedded narrative of a place is simulated may be further augmented by the use of costumes and props and also by the use of various media technologies such as mobile phones containing instant messaging, camera, GPS and mobile internet creating what Manovich has called a *cellspace* constituted by:

> cellspace technologies (also referred to as mobile media, wireless media, or location-based media) delivering data to the mobile physical space dwellers. Cellspace is physical space that is 'filled' with data, which can be retrieved by a user via a personal communication device. Some data may come from global networks such as the internet; some may be embedded in objects located in the space around the user. Moreover, while some data may be available regardless of where the user is in the space, it can also be location specific. (Manovich 2006, p. 221)

This is exactly what the "Trust No-one!" project is aiming at. Here physical reality and computer mediated reality become mixed and may be described as "game spaces that seek to integrate the virtual and physical elements within a comprehensibly experienced perceptual game world" (Walther 2005, p.489). In these types of games, the mediated space is collapsed into the physical place (and vice versa). Because the game is *pervasive*, that is penetrating the physical world, and *ubiquitous*, that is potentially present everywhere, the fictional game world becomes a part of the player's physical environment, and at the same time the physical environment is becoming part of different mediated spaces ranging from the GPS' graphical representation of the physical environment and the player's position in this environment and SMS and e-mails as communication channels for navigational information to websites containing online-dimensions of the game universe. As such the mix between physical locations and their media-induced layers of information constitute a playable storyspace for the participants to interact with.

The potential of the game format

Why choose the game format when communicating culture? The answer is quite simple: games are engaging, they are activating and they put the users in the role as participants rather than recipients. When analyzing the communicational potential of computer games we can start off with examining the role of games in e.g. socialization processes. Here e.g. Piaget's findings have had great impact on modern theory of pedagogy and different learning theories which proposes that we should regard learning as a) complex processes, based on b) construction of knowledge, which are c) taking place across different contexts, d) placing the child in the centre, and which e) primary modes are a combination between 'learning by doing' and 'learning by reflection' (see Sørensen, 2005). As a system of communication this educational model with its complex communicational processes resembles the participatory, user-centered communicational logic and the interactive, play-centric communicational mode of computer games. Current learning theories (see Gee 2004, 2005) focus on knowledge more as a constructive activity, as process, rather than content, which may be transported from teacher to student. If we were to erase the boundaries between these two different types of learning, it is our belief that the concept of education may be expanded and the learning situation will probably become more engaging, activating and thus more effective.

The overall goal of the "Trust No-one" project is to create an augmented reality game about the cultural history of Kolding with the use of mobile phones and web 2.0-services[2]. The game has a touristic purpose and is aiming at the people visiting Kolding for e.g. shopping or sight-seeing purposes. This target group represent a great challenge because their behavior do not necessarily allow long and time-consuming game-session: there should be room for shopping, grapping a bite and so on, so instead of creating a guided tour with the use of augmented reality technology and a continuous crime story, the project is based on small tableaus where the history of the city is coming to life when the participants put up their smart phones and experience the over-layering of historical (and fictional) actions and events on the streets and alleys, squares, bridges, buildings and monuments which functions as narrative canvases thus reassembling and constructing the history of renaissance Kolding conducted by the participants operating the city infrastructure as a game universe and the media technology as navigational and informational tools. So the participants are to play an active role in the storytelling process in the same way as with the *23 Sculls* project in Vejle. In this particular project the participants were put in the role of journalists investigating the disappearance of a museum inspector and a possible conspiracy running all the way through the history of the city. There are a lot of clues, hints, story fragments to be found both in the physical city and in its mediated online counterpart – pictures, videos, trails or routes may be found on Flikr, YouTube and Google Maps. But the participants are to connect the dots themselves, they need to 'write' the story about the conspiracy using their phones as cameras and uploading pictures as well as small pieces of text to their journalistic stories when the game is over.

Even though the potential participants in the "Trust no-one!" augmented reality game in Kolding will not be cast in a clear-cut protagonist role in the same way as with the Vejle-project, they will be put in the role of the exploring observer who can open layers of information (images, videos, audio, text) at specific locations in the centre of the city of Kolding and thus engage in small narrative tableaus containing characters and events from the specific time period at stake (the renaissance).

The use of the augmented reality game-format is – in a broader perspective – an attempt to develop a new way of communicating and teaching cultural knowledge based on the use of mobile and

[2] The use of web 2.0 open standards and freeware is an important part of this project. Museums and other types of educational institutions do not have a lot of money to put into prototypical systems acquiring unique hard- and software. The way we see ubiquitous computing is not just a question of putting computational power into everything but also making this technology widely accessible to users in an easy-to-use and within-economically-reach kind of way.

ubiquitous interactive and social media technology which engages and activates the user. The educational model is not that of one-way-communication implying that the teacher possesses knowledge and the student receives it. It is based on a participation- and experience-based model in which knowledge is not just a question about sending and receiving but about collaboration and co-creation and collective learning-processes. In this processes the interactive and collaborative media technology used in the game system becomes creative tools in a learning constructing and knowledge producing way.

Digital media challenging our ways of communicating culture

The use of mobile technologies in museum exhibits is by no means of recent date or even necessarily tied to digital technology (see below). Nor is the idea of augmentation of museum experiences through digital technology something that has surfaced with the introduction of mobile devices such as tablet computers and mobile phones. At e.g. MIT and its Media Laboratory researchers have been experimenting with and theorizing augmented reality and interactive spaces in the context of e.g. museum exhibits since the early 1990ies, introducing

> software architecture used in conjunction with real-time computer-vision-based body tracking and gesture recognition techniques to choreograph digital media together with human performers or museums visitors [...] with coordinated perceptual intelligence, behaviors, personality, and intentionality [...] able to engage the public in an encounter with virtual characters that express themselves through one or more of these agents [...] which augment the traditional performance stage with images, video, music, and text, and are able to respond to movement and gesture in believable, aesthetical, and expressive manners. (Davenport et.al. 2000)

But in the last 10 years the amount of projects and systems being developed and research being made within the field of museum communication has increased considerably; projects which have focused on augmentation strategies such as the *History Unwired* project developed by MIT in collaboration with University of Venice in which the tails of historic Venice were told in the shape of "a walking tour through one of Venice's more hidden neighborhoods, delivered over location-aware multimedia phones and PDAs" (Epstein & Vergani 2006, p.302) or projects which have explored the potentials and challenges of digital and especially mobile media in museum and how

the new media technology both enhances, enriches and expands the museum experience in ways which may be said to realize the concept of *museums without walls* put forward by André Malraux in 1967 (see e.g. Arvanitis 2005, Wessel & Mayr 2007, Brugnoli et.al. 2007, Wessel et.al. 2008). The present paper is lending itself to this field of practice and research. However, the "Trust No-one" project presented here radicalizes this concept in the way that the focus is both on information and audience dealing with the relationship between audience and media/mediated information and the relationship between members of the audience. The media facilitates interactive dialogues with the physical "exhibition" (the locations in Kolding functioning as history-communicating devices) and at the same time it organizes the audience participation and experience in a narrative structure which is augmenting the "exhibition" and urges the audience to perform, to participate and collaborate. As such this project is symptomatic of the new way of communicating knowledge and cultural heritage which is brought forward by new media technologies, the digitization of cultural heritage and the focus on experience culture (or economy) and the shift from users to *prod*users (Brun 2008), from audiences to participants (Jenkins 2003) and co-creators (Boswijk et.al. 2005)[3]:

> In collaborative communities the creation of shared content takes place in a networked, participatory environment which breaks down the boundaries between producers and consumers and instead enables all participants to be users as well as producers of information and knowledge - frequently in a hybrid role of produser where usage is necessarily also productive. Produsers engage not in a traditional form of content production, but are instead involved in produsage - the collaborative and continuous building and extending of existing content in pursuit of further improvement. Participants in such activities are not producers in a conventional, industrial sense, as that term implies a distinction between producers and consumers which no longer exists; the artifacts of their work are not products existing as discrete, complete packages; and their activities are not a form of production because they proceed based on a set of preconditions and principles that are markedly at odds with the conventional industrial model. (Bruns 2008, p.21)

[3] This new paradigm for museums has over the last couple of years been dealt with in a series of academic publication such as Loïs Tallon and Kevin Walker (eds.): *Digital Technologies and The Museum Experience* (2008), Ross Parry (ed.) *Museums in a Digital Age* (2010), Fiona Cameron and Sarah Kenderdine (eds.): *Theorizing Digital Cultural Heritage* (2007/2010), Beryl Graham and Sarah Cook: *Rethinking Curating. Art after New Media* (2010) and Nina Simon: *The Participatory Museum* (2010).

As is the case with museum exhibitions which make use of augmented (alternate) reality games as communication format, the exhibition is not confined to a specific museum space at all, but can make use of a variety of locations. An augmented reality game such as *Hikuin's Vendetta* (2008) make use of 12 locations in the central part of downtown Aarhus (Denmark) to let the visitors participate in a crime mystery taking place in the Viking Age: "Explore the Aarhus of the Viking Age via your mobile telephone. The Viking crime HIKUIN´s vendetta takes you to Viking locations in the centre of Aarhus, and takes you on a search for the missing Hikuin" (see: http://www.visitaarhus.com-/international/en-gb/menu/turist/hvad-sker-der/hikuins-blod/hikuin.htm).

The use of maps and integration of audio and video displayed on mobile phones in this project resembles the project case-studied in this paper, although the degree of participation and possibility for co-creation is quite limited in *Hikuin's Vendetta*. The design is only partly focusing on important principles of participation such as "dialogue or creative expression, shared learning or co-creative work" (Simon 2010, p.1). The design – although making use of the mobile phone as a creative multimedia tool – settles on a traditional museum way of communicating in which the institution (here Visit Aarhus) "provides content for visitors to consume" (op.cit. p.2). In contrast, the project presented in this paper, makes use of media technology which may be described as participatory and social, thus facilitating a communication format which on the one hand is embedded in the experience economy paradigm with its focus on co-creation and on the other is based on learning theories that regard learning as constructivist processes in which participants "act as content creators, distributors, consumers, critics, and collaborators" (ibid.).

Exit

This paper has demonstrated how the interplay between mobile media technology and physical places is a potent tool when it comes to meeting the challenges and potentials put forward by digital, mobile media to museums when it comes to creating new and engaging experiences which are based on collaboration, participation and co-creation. Digital augmentation of physical places makes us see things in new ways. Buildings are not just buildings, streets are not just streets – they carry stories, they carry cultural meaning which audiences through the gameplay and the interplay between the physical space of the city and the mobile media may acquire, discuss, investigate and relate to in a playful and creative way.

The “Trust no-one!” project in the making can be visited on Facebook, which is being used as a development tool:
https://www.facebook.com/media/set/?set=a.3032634648928.138106.1054748211&type=1#!/Stolpaaingen

Literature

Arvanidos, K. (2005). “Museums outside Walls: Mobile Phones and the Museum in the Everyday”. Proceedings from IADIS International Conference on Mobile Learning
Retrieved September 1st 2010 from http://www.iadis.net/dl/final_uploads/200506C016.pdf

Boswijk, A. et.al. (2005). *A New Perspective on the Experience Economy: Meaningful Experiences*, Amsterdam: Pearson Education

Brugnoli, M.C. et. al. (2007). “Augmented itineraries: Mobile services differentiating what museums has to offer”. In *PsychoNology Journal*, 2007, vol.4, no. 3

Brun, A. (2008). *Blogs, Wikipedia, Second Life, and Beyond: From Production to Produsage*. New York: Peter Lang Publishing

Davenport, G. et.al. (2000). ”Media in performance: Interactive spaces for dance, theatre, circus, and museum exihibits”. In: *IBM Systems Journal*, Vol.39, Nos. 3&4

Epstein, M. & Vergani, S. (2006), “History Unwired: Mobile Narrative in Historic Cities”. Proceedings from AVI ’06, Venice May 23rd-26th

Gee, J.P. 2004. *Situated language and learning: A critique of Tranditonal schooling*. London: Routledge

Gee, J.P. 2005. ”Game-Like Learning : An Example of Situated Learning and Implications for Opportunity to Learn”.

Jenkins, H. (2003). *Rethinking Media Change: The Aesthetics of Transition*. Cambridge MA: MIT Press

Malraux, A. (1967). *Museums Without Walls*. London: Secker and Warburg

Manovich, L. (2006). “The poetics of augmented space”. In: *Visual Communication* 2006; 5. Retriewed October 12th 2008 from http://vcj.sagepub.com/cgi/content/-abstract/5/2/219

Meyrowotz, J. (2005). “The Rise of Glocality. New Senses of Place and Identitu in the Global Village”. In K. Nyiri (ed.). *A sense of place: The global and the local in mobile communication*. Vienna: Passagen Verlag

Molz, J. G. (2004). ”Playing online and between the lines: round-the-world websites as virtual places to play”, in: M. Sheller & J. Urry (eds): *Tourism Mobilities,* London: Routledge

Piaget, J. 1976. *Play – Its Role in Development and Evolution*. New York: Penguin Books.

Samis, P. (2008). “The Exploded Museum”. In: Tallon, L. & Walker, K. (eds.). *Digital Technologies and the Museum Experience*. Plymouth: AltaMira Press

Scannell, P. (1996): *Radio, Television & Modern Life*. Oxford: Blackwell

Simon, N. (2010). *The Participatory Museum*. Santa Cruz: Museum 2.0

Sørensen, E. 2005. “Lær af computerspil!” [Learn from computer games]. In Kampmann Walther, B. & Jessen, C. (eds.). *Spillets verden. En bog om computerspil*. Copenhagen: University of Education Press.

Tallon, L. (2008). “Introduction: Mobile, Digital, and Personal”, in: Tallon, L. and Walker, K. (eds.) *Digital Technologies and the Museum Experience*. Plymouth: AltaMira Press

Walter, B. K. (2005). “Notes on the Methodology of Pervasive Gaming”. In F. Kishino et. al. (eds.). *ICHC 2005, LNCS 3711*. IFIP International Federation for Information Processing

Wessel, D. & Mayr, E. (2007). ”Potentials and Challenges of Mobile Media in Museums”. Retreived September 1st 2010 from http://www.iwm-kmrc.de-/museum/publications/IMCL2007_MayrWessel.pdf

Wessel, D. et. al. (2008). “Supporting Visitors’ Interest within and beyond Museums with Mobile Media”. Proceedings from Nodem ’08, Reykjavik December 3rd-5th